IN THE SPECIFICATION

Please amend the specification as shown below.

Please amend the paragraph beginning on page 1, line 10, with the following amended paragraph:

A conventional representative image compression method is a JPEG (Joint Photographic Coding Experts Group) system standardized by ISO (International Organization for Standardization). In this JPEG system, DCT (Discrete Cosine Transform) is used to compress and encode mainly still images. It is known that this system provides excellent coded/decoded images if a relatively high bit number is assigned. In this system, however, block deformation specific to DCT becomes conspicuous so that deterioration subjectively becomes conspicuous.

Please amend the paragraph beginning on page 1, line 17, with the following amended paragraph:

Differently from the above system, studies have recently been made [eagerly] of a system in which an image is divided into a plurality of band ranges called filter banks by a filter which combines a high-pass filter and a low pass filter, and coding is carried out for every band range. Particularly, wavelet coding is strongly regarded as a new technique which will substitute the existing DCT technique because the wavelet coding excludes the drawback of the DCT technique, i.e., block deformation becomes conspicuous under high compression.

Please amend the paragraph beginning on page 2, line 9, with the following amended paragraph:

Presently, many products such as electronic still cameras, video movies, and the like adopt the JPEG system, the MPEG system, or a so-called DV (Digital Video) system. [Every] Each of these compression coding systems adopts DCT for its conversion system. It is supposed that products as described above, which are based on wavelet conversion, will appear on the market in the future. Discussions for improvements in the efficiency of the coding system are eagerly carried out by research organizations. Actually, JPEG 2000 (being prepared by ISO/IEC/JTC1SC29/WG1 which is the same organization as JPEG), which is expected to be the international standard system for still images and which can be said to be a follower in the next generation, is a format from which a standardization recommendation Part-1 is to be issued in December 2000. According to the JPEG 2000, it has been decided to adopt wavelet conversion in place of existing DCT of the JPEG, as a conversion system as the basis of image compression.

Please amend the paragraph beginning on page 3, line 4, with the following amended paragraph:

(1) At FCD (Final Committee Draft) concerning Part-1 of JPEG-2000, there are two filters for wavelet conversion which is presently defined in July 2000. One is a 5x3 filter of an Integer type for reversible conversion, and another filter is a 7'9 filter of a Float type for irreversible conversion.

Please amend the paragraph beginning on page 3, line 13, with the following amended paragraph:

(3) On the other side, as a result of experiments, a 5x3 filter of a fixed-point type which is obtained as a more precise version of the 5x3 filter of the Integer type described not only achieves a coding efficiency of excellent performance equivalent to that of the 7x9 filter

of the Float type as described above but also has parts common to the 5x3 filter of the Integer type, in its internal calculators. Accordingly, there is an advantage in that enlargement of hardware can be reduced to the least by comprising both filters, without sacrificing the coding efficiency.

Please amend the paragraph beginning on page 3, line 20, and continuing on page 4, with the following amended paragraph:

(4) FCD according to Part-1 of JPEG-2000 describes a calculation expression for the 5x3 filter of the Integer type as described above. In accordance with the procedure thereof, a wavelet conversion coefficient can be generated. However, the FCD includes no description about the calculation means of the 5x3 filter of a Fixed-point type. Settlement of compatibility between both filters relates to settlement of a common circuit as described above and is thus very important.

Please amend the paragraph beginning on page 5, line 18, with the following amended paragraph:

Also, an increase of the [entire] hardware components can be reduced by adopting a structure common to the fixed-point type wavelet conversion means and the integer precision type wavelet conversion means.

Please amend the paragraph beginning on page 6, line 12, with the following amended paragraph:

FIG. 3, including FIGS. 3A and 3B, is a view showing examples of calculation word lengths at fixed-point precision and at integer precision;

Please amend the paragraph beginning on page 11, line 1, with the following amended paragraph:

In this respect, FIG. 3B shows an example of calculation with precision of integer, where bits up to the lowermost class (in the right end in the figure) are used as an integer part. Therefore, the point P indicating the decimal point exists in the right end (the lowermost side). In addition, the calculation of this integer precision comprises only the bit indicating the code (+/-).

Please amend the paragraph beginning on page 11, line 19, and continuing on page 12 with the following amended paragraph:

At first, the structure shown in FIG. 4 will be cited as a structure of a normal wavelet conversion section. The example shown in FIG. 4 is a structural example in which octave division which is the most normal wavelet conversion among several methods. The case shown in this FIG. 4 adopts a structure in which the level number is 3 (levels 1 to 3), an image signal is divided into a low range and a high range, and only the component of the low range is divided into levels. Also, FIG. 4 exemplifies wavelet conversion with respect to a one-dimensional signal (e.g., the horizontal component of an image), for the sake of convenience. By expanding this wavelet conversion to two dimensions, it is possible to deal with two-dimensional image signals.

Please amend the paragraph beginning on page 15, line 13, with the following amended paragraph:

At first, with reference to FIG. 7, explanation will be made of an integer type wavelet conversion calculation, integer precision type 5x3 filter (analysis side), which is defined in FCD (Final Committee Draft) of JPEG-2000 Part-1. FIG. 7 is a view for explaining the

calculation of the integer precision type 5x3 filter. This figure shows an operation of performing one-dimensional wavelet conversion, to convert input image data in the left end into a low band component s and a high-band component d. In the following, specific operation will be explained with reference to this figure. Suppose that d_m^n is the m-th high-band component coefficient of wavelet conversion on the level n. Similarly, S_m^n is the m-th low-band component coefficient of wavelet conversion on the level n. In case where n = 0 is given, the input image itself is takes, as shown in FIG. 7.

Please amend the paragraph beginning on page 18, line 8, with the following amended paragraph:

Next, with reference to FIG. 8, explanation will be made of a fixed-point type wavelet conversion calculation in the analysis side using a fixed-point precision 5x3 filter. FIG. 8 shows an operation in which one-dimensional is performed to convert input image data at the left end, into a low-band component s and a high-band component d. In the following, specific operation will be explained with use of the same figure. Suppose now that d_m^n is the m-th high-band component coefficient of wavelet conversion on the level n. In case of n = 0, it is apparent that it is an input image. Suppose similarly that s_m^n is the m-th low-band component coefficient of wavelet conversion on the level n.

Please amend the paragraph beginning on page 23, line 7, with the following amended paragraph:

Next, with reference to FIG. 10, explanation will be made of a calculation in fixed-point type wavelet reversal conversion using a fixed point precision 5x3 filter. FIG. 10 shows an operation in which one-dimensional wavelet conversion (reversal conversion) is performed to convert the low-band component s and the high-band component d at the left

end in the figure, into output pixels at the right end in the figure. In the following, specific operation will be explained with reference to the figure. Suppose that d_m^n is the m-th high-band component coefficient of wavelet conversion on the level n. Suppose also that s_m^n is the m-th low-band component coefficient of wavelet conversion on the level n. Where n = 0 is given, s and d are respectively an odd-numbered pixel and an even-numbered pixel.